

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A sputtering target or thin ~~filmed~~ film formed therefrom comprising a sputtering target or thin film made of a high purity hafnium material, wherein a zirconium content of the target or thin film is 1 to 1000wtppm, and a purity of the target or thin film is 4N to 6N excluding gas components of carbon, oxygen and nitrogen.

Claim 2 (previously presented): A sputtering target or thin film according to claim 1, wherein oxygen is 500wtppm or less, nitrogen and carbon are respectively 100wtppm or less, and iron, chromium and nickel are respectively 10wtppm or less.

Claim 3 (withdrawn): A method of manufacturing a high purity hafnium sputtering target according to claim 1, comprising the steps of:

making aqueous solution of chloride of hafnium,
thereafter, removing zirconium therefrom via solvent extraction,
performing neutralization treatment to obtain hafnium oxide,
further performing chlorination to obtain hafnium chloride, and
reducing said hafnium chloride to obtain a hafnium sponge.

Claim 4 (withdrawn): A method according to claim 3, wherein moisture content in the hafnium chloride before reduction and in the atmosphere is 0.1 wt% or less, and nitrogen content therein is 0.1 wt% or less.

Claims 5-9 (canceled).

Claim 10 (withdrawn): A method according to claim 4, wherein a reduction atmosphere used in said reducing step is an argon atmosphere, and wherein said reducing step is performed under a positive pressure of 1 atmospheric pressure or greater.

Claim 11 (withdrawn): A method according to claim 10, further comprising the step of subjecting said hafnium sponge to electron beam melting to obtain a hafnium ingot.

Claim 12 (withdrawn): A method according to claim 11, wherein during said reducing step said hafnium chloride is reduced with a metal having a stronger chloridization power than hafnium.

Claim 13 (withdrawn): A method according to claim 12, wherein said hafnium sponge formed as a result of said reducing step has a zirconium content of 1 to 1000 wtppm and a purity of 4N to 6N excluding gas components of carbon, oxygen and nitrogen.

Claim 14 (withdrawn): A method according to claim 13, wherein said hafnium sponge formed as a result of said reducing step has 100 wtppm or less of oxygen, 30 wtppm or less of

nitrogen and carbon, respectively, and 5wtppm or less of iron, chromium, and nickel, respectively.

Claim 15 (withdrawn): A method according to claim 3, wherein a reduction atmosphere used in said reducing step is an argon atmosphere, and wherein said reducing step is performed under a positive pressure of 1 atmospheric pressure or greater.

Claims 16-19 (canceled).

Claim 20 (withdrawn): A method according to claim 3, further comprising the step of subjecting said hafnium sponge to electron beam melting to obtain a hafnium ingot.

Claims 21-22 (canceled).

Claim 23 (withdrawn): A method according to claim 3, wherein during said reducing step said hafnium chloride is reduced with a metal having a stronger chloridization power than hafnium.

Claim 24 (withdrawn): A method according to claim 3, wherein said hafnium sponge formed as a result of said reducing step has a zirconium content of 1 to 1000wtppm and a purity of 4N to 6N excluding gas components of carbon, oxygen and nitrogen.

Claim 25 (withdrawn): A method according to claim [24] 3, wherein said hafnium sponge formed as a result of said reducing step has 100wtppm or less of oxygen, 30wtppm or less of nitrogen and carbon, respectively, and 5wtppm or less of iron, chromium, and nickel, respectively.

Claim 26 (new): A sputtering target or thin film according to claim 1, wherein said purity of the target or thin film is 4N to 6N excluding zirconium and gas components of carbon, oxygen and nitrogen.

Claim 27 (new): A sputtering target or thin film according to claim 1, wherein said purity of the target or thin film is 4N5.

Claim 28 (new): A sputtering target or thin film according to claim 1, wherein said purity of the target or thin film is 6N.

Claim 29 (new): A sputtering target or thin film according to claim 1, wherein said purity of the target or thin film is 4N5 to 6N.